

## Health Literacy in the Real World: Awareness, Ideas, Solutions

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## Objectives

By the time you're done with this education session, you should be able to:

1. Understand the incidence of low literacy in the U.S. and its impact on the healthcare system
2. Discuss connections between health literacy and health disparities
3. Discuss solutions to addressing low health literacy, including the National Action Plan

## Literacy / Health Literacy Definitions Literacy

- "Using *printed and written information* to function in society, to achieve one's goals, and to develop one's knowledge and potential" (Kirsch et al., 1993)
- "[The] ability to *identify, understand, interpret, create, communicate, compute* and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society." (UNESCO, 2004)

## Health Literacy

- "The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Ratzen and Parker, 2000)
- "The ability to read and *comprehend* prescription bottles, appointment slips, and the other essential health-related materials required to *successfully function* as a patient." (AMA Council of Scientific Affairs, 2000)
- "Health literacy allows the *public and personnel working in all health-related contexts* to find, understand, evaluate, communicate, and use information. Health literacy is the use of a wide range of skills that improve the ability of people to act on information in order to live healthier lives. These skills include reading, writing, listening, speaking, numeracy, and critical analysis, as well as *communication and interaction skills*." (Calgary Charter on Health Literacy, 2008)

## Health Literacy Components

- Reading and writing
- Listening and verbal communication (patient and provider)
- Numeracy
  - ✓ Computation skills
  - ✓ Interpreting / evaluating risk (%)
- Self-efficacy

-Institute of Medicine, Health Literacy: A Prescription to End Confusion, 2014

## Health Literacy Components

- Culture / belief systems
- Mismatch between provider demand and patient skill level
- Mismatch of reading level / materials
- Strong relation to health disparities
- Strong relation to safety and quality

### A Health Literacy Analogy: Do You Understand?

“Transverse and longitudinal response functions have been extracted for  $^3\text{He}$ ,  $^{12}\text{C}$ ,  $^{40}\text{Ca}$ ,  $^{48}\text{Ca}$ , and  $^{56}\text{Fe}$  up to a momentum transfer of 550. The quenching of the longitudinal response function in the quasi-elastic region is significant and might be a signature of modification of the intrinsic properties of the nucleon in nuclear matter.”

—Zein-Edine Meziani. Transverse and longitudinal response functions in quasielastic electron scattering from nuclei. Nuclear Physics A Volume 446, Issues 1-2, 16 December 1985, Pages 113-122

### Real-life example

An 89-year-old man with dementia is diagnosed with an ear infection and is prescribed an oral liquid antibiotic. His wife understands that he must take one teaspoon twice a day. After carefully studying the bottle's label and not finding administration instructions, she fills a teaspoon and pours it into his painful ear.

Parker, R. et al. J Health Comm, 2003

### Another real-life example

Mr. G, 45, an Hispanic immigrant, native Spanish language speaker, has a job health screening. He is told his BP is high, can't work until it's controlled. Given  $\beta$ -blocker, diuretic, instructed to take each "once a day." 1 week later, presents @ ED, BP very low, dizzy. Docs can't figure out. Spanish speaker asks him how many he took each day. "22," says Mr. G. (In Spanish, *once* means 11.)

Nielsen-Bolttman et al. JGIM "A Prescription to End Confusion" 2004

### This happens...

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### This happens, too...

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### Which of the following is the strongest predictor of an individual's health status?

- A. Age
- B. Income
- C. Literacy skills
- D. Employment status
- E. Education level
- F. Racial or ethnic group

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—National Patient Safety Foundation

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### Health Literacy Myths

- Writing at a low grade reading level / using plain language is “dumbing down”
- Using plain language that is easy to read is unprofessional and insulting.
- Writing at a lower grade level is easy to do
- Why do this? Most people understand what we send to them

### Health Disparities

- “[D]ifferences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the U.S.” (NIH, 1999)
- “... a population-specific difference in disease, health outcomes, or *access to care*.” (HRSA, 2000)
- “...difference in health status between a defined portion of the population and the majority. Disparities can exist because of SES, age, ... gender, race/ethnicity, language, customs or other cultural factors, [or] disability...” (Minnesota Dept. Health, 2002)

### Health Disparities Components

- Restricted access to healthcare services
- Includes unjust / preventable inequities
- Disproportionately affects minorities / poverty / low educational attainment
- Shared responsibility among system, providers, patients

### Connections: Health Literacy / Health Disparities

- Low systemic awareness of the problem
- ↓ access to *usable* health promotion materials
- Disproportionate by poverty / language barriers / education / disability
- Lower rates of insured / less access
- Victims of poor cultural competency / lack of racial/ethnic diversity in HC system

### Connections: Health Literacy / Health Disparities

- Higher hospital admission rates
- Receive poorer quality healthcare
- Poorer outcomes
- Inadequate language access services
- Perception of unequal treatment
- Poor self-efficacy
- Preventable

### Data Sources on Adult Literacy

- NALS (National Adult Literacy Survey) 1992
- NAAL (National Assessment of Adult Literacy) 2003  
*Added Health Literacy Module*

### Features of the NAAL

- 19,000 U.S. adults (ages 16+) in households, prisons (representing ~ 222 million US adults)
- Added Health Literacy component
- Direct measurement of literacy (task-based)
- Assessment lasted ~ 1 hour (equiv. 3 hours assessment)
- Measure of "Functional Literacy" on written materials
- Next NAAL: Field test 2015, Data collection 2016

### NAAL Health Literacy Component

- About 20% of NAAL questions
- Measured health-related functional skills
- 3 domains (everyday tasks):
  - clinical (meds, dx, tx. eg: prep for screening)
  - preventive (healthy lifestyle. eg: mammogram)
  - navigation (rights, responsibilities. eg: find radiology dept., interpret the bill)
- Strong relation: literacy→ health literacy

### NAAL Health Literacy Findings:

- 36% have limited health literacy skills (22% Basic, 14% Below Basic)
- About 12% considered Proficient
- Includes 3% who did poorly on basic screening tasks, routed to alternative assessment
- Does not include 2% who knew no English or Spanish
- Majority (53%) had intermediate HL levels
- Women's avg. HL score 6 pts. higher (4% more men in Below Basic)

### Who has poor health literacy?

- Nearly 60% of 65+ in Basic/Below Basic
- Health ins. from employer ↑ HL, Medicare/Medicaid/No ins ↓ HL
- 80% of those in Below Basic/58% in Basic did not obtain their health info from Internet
- Hispanics (12% of adult pop.) represent 35% of those in Below Basic HL category
- Below poverty level (17% adult pop.) represent 43% of those in Below Basic HL category
- 75% who self-reported poor health in Below Basic

## Why Does Health Literacy Matter?

### Those with limited literacy skills:

- Report poorer overall health
- Have poorer ability to manage their chronic diseases
- Have poorer outcomes
- Less likely to understand their diagnosis
- Less likely to have screening / preventive care
- Present in later stages of disease
- Are more likely to be hospitalized / rehospitalized

## Why Does Health Literacy Matter?

### Cost of Poor Health Literacy:

- \$73 billion in unnecessary costs annually  
*(Friedland, Georgetown University, 2003)*
- \$106-\$238 billion in unnecessary costs annually  
*(Geron, University of Connecticut, 2002)*

### Cost of Chronic Disease:

- \$1.7 trillion (75% of HC expenditures)
- Nearly 1 in 2 Americans live with a chronic disease
- 90% >65 have a chronic disease;  
77% have 2+
- 70% of annual US deaths (F DA 2008)

## Impact on Health Process

- Filling out forms at hospital/doctor's office
- Navigation
- Completing insurance paperwork
- Reading and acting appropriately on Rx labels
- Reading / understanding directions by MD / RN
- Reading / understanding informed consent material

## Toward Solutions

- Universal precautions (speaking, materials, patient demand)
- Increase awareness / discuss / listen
- Targeted solutions / partnerships (librarians)
- Education (IHA Health Literacy Conference)

## Toward Solutions

- IHA's 10<sup>th</sup> Annual Health Literacy Conference
- Low literate patient's perspective
- Numeracy / Culture / Social Networks & Health
- How-to sessions
- National Action Plan
- More

## Websites

- [nces.ed.gov/naal](http://nces.ed.gov/naal)
- [www.health.gov/communication/literacy](http://www.health.gov/communication/literacy)
- [www.ahrq.gov/browse/hlitix.htm](http://www.ahrq.gov/browse/hlitix.htm)
- [www.hsph.harvard.edu/healthliteracy](http://www.hsph.harvard.edu/healthliteracy)
- [www.iha4health.org](http://www.iha4health.org) (more links)
- <http://lincs.ed.gov/mailman/listinfo/Healthliteracy/>  
(join listserv)
- [ama-assn.org](http://ama-assn.org) (Foundation/Health Literacy)
- [foundation.acponline.org/hl/hlresources.htm](http://foundation.acponline.org/hl/hlresources.htm)
- [www.iom.edu](http://www.iom.edu) (health literacy)
- [plainlanguage.gov](http://plainlanguage.gov)